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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/802,808	03/18/2004	Makoto Momota	Q80433	5096
23373	7590	06/07/2005	EXAMINER	
SUGHRUE MION, PLLC 2100 PENNSYLVANIA AVENUE, N.W. SUITE 800 WASHINGTON, DC 20037			THORNTON, YVETTE C	
			ART UNIT	PAPER NUMBER
			1752	

DATE MAILED: 06/07/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/802,808

Applicant(s)

MOMOTA ET AL.

Examiner

Yvette C. Thornton

Art Unit

1752

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 18 March 2004.  
2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.  
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-17 is/are pending in the application.  
4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.  
6) ☒ Claim(s) 1-17 is/are rejected.  
7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.  
8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.  
10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☒ All b) ☐ Some \* c) ☐ None of:  
1. ☒ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)  
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)  
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 03182004.  
4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.  
5) ☐ Notice of Informal Patent Application (PTO-152)  
6) ☐ Other: \_\_\_\_\_.

### DETAILED ACTION

This is written in reference to application number 10/802808 filed on March 18, 2004 and published as US 2004/0202954 A1 on October 14, 2004.

#### *Priority*

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

#### *Information Disclosure Statement*

2. The Information Disclosure Statement(s) filed on March 18, 2004 has/(have) been entered and fully considered.

#### *Double Patenting*

3. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

4. Claims 1-17 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-18 of copending Application No. 10/809,389 [Nakao]. Although the conflicting claims are not identical, they are not patentably distinct from each other because both pertain to a positive resist composition comprising (A) a resin containing a repeating unit originated in an acrylic acid ester derivative wherein the said resin has at least one kind of repeating unit selected from formula (IV) and repeating units having groups represented by (V-1) to (V-4); and repeating units represented by formula (AII); (B) an acid generating compound and (C) an organic solvent

Art Unit: 1752

mixture comprising at least one selected from propylene glycol monoalkyl ether carboxylate, alkyl lactate and a linear ketone; and a cyclic ketone.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

***Claim Rejections - 35 USC § 102***

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

6. Claims 1-4 and 8-17 are rejected under 35 U.S.C. 102(b) as being anticipated by Uetani et al. (US 2001/0044070 A1).

*The examiner notes that the said reference has been patented as US 6579659 B2 and is citable under 35 USC 102(e). For the sake of brevity, duplicate rejections will not be made.*

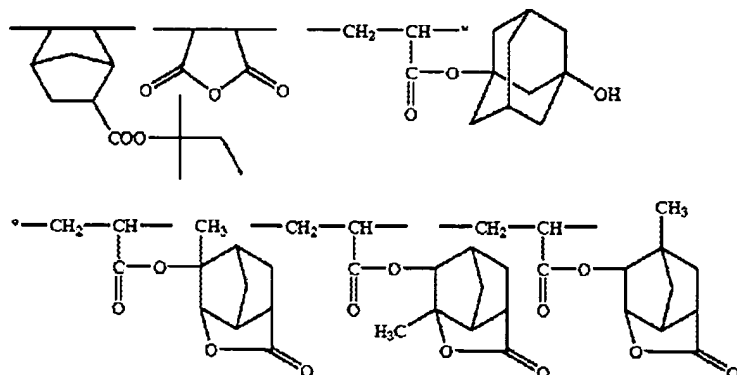
7. Uetani exemplifies a resin A1 comprising the repeating units of 2-ethyl-2-adamantyl methacrylate, 3-hydroxy-1-adamantyl methacrylate, and 5-methacryloyloxy-2,6-norbornanecarbolactone (resin synthesis ex. 1; p. 0096-0097). Resist composition were prepared by admixing the said resin with an acid generating agent, a quencher (p. 0115-0119) and a solvent mixture of 57 parts propylene glycol monomethyl ether acetate (PGMEA) and 3 parts  $\gamma$ -butyrolactone (p. 0126-0128). See also table 1. The formed composition was coated on a silicon wafer, exposed with an ArF excimer stepper and developed with aqueous TMAH (p. 0129-0130). See also resin A2-A6 and AX.

Art Unit: 1752 °

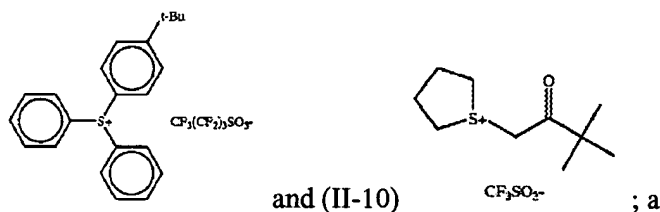
It is the examiner's position that 5-methacryloyloxy-2,6-norbornanecarbolactone meets the limitations of claimed formula (VI); 3-hydroxy-1-adamanyl methacrylate meets the limitations of claimed formula (AII) and 2-ethyl-2-adamanyl methacrylate meets the limitations of instant claim 8. Further, PGMEA meets the limitations of a propylene glycol monoalkyl ether carboxylate and  $\gamma$ -butyrolactone meets the limitations of a cyclic ketone.

Uetani further teaches that the taught composition may also contain various additives such as sensitizers, dissolution inhibitors, and surfactants (p. 0090).

8. Claims 1-2, 4-5 and 9-17 rejected under 35 U.S.C. 102(e) as being anticipated by Kodama et al. (US 6,858,370 B2). Kodama exemplifies in example IV-44 a resist composition comprising a resin 85



having the following structure:



photoacid generator mixture of compound (I-8)

and (II-10)

; a

solvent mixture of propylene glycol monomethyl ether acetate (S1) and  $\gamma$ -butyrolactone (S7); a surfactant and an amine compound (c. 187).

The applied reference has a common assignee with the instant application. Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 102(e) might be overcome either by a showing under 37 CFR 1.132 that any invention

Art Unit: 1752

disclosed but not claimed in the reference was derived from the inventor of this application and is thus not the invention "by another," or by an appropriate showing under 37 CFR 1.131.

*Conclusion*

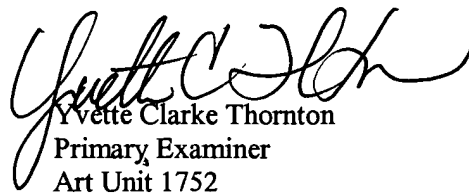
9. The following references are all citable under 35 USC 102(b) or (e). For the sake of brevity, multiple rejections have not been made.

- Takata et al. (US 2003/0039918 A1 & US 6835527 B2) pertaining to a chemical amplifying type positive resist composition.
- Takata et al. (US 2003/0180659 A1) pertaining to a resist composition.

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Yvette C. Thornton whose telephone number is 571-272-1336. The examiner can normally be reached on Monday-Thursday 8-6:30.

11. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Cynthia H. Kelly can be reached on 571-272-1526. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

12. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
Yvette Clarke Thornton  
Primary Examiner  
Art Unit 1752

yct  
June 4, 2005